Meissner's corpuscle, and of the rapidly accumulated evidence of the same condition in that of the Pacinian, Herbstian, and even the Grandryian type. This discovery, which we owe to Dogiel and his pupils, with Timofeew and Sala, imparts a new character to the tactile body in all its forms; and it marks one of the most welcome and important advances in recent histological work, demanding the attention of even the elementary student. If only it had been made in Cambridge!

OUR BOOK SHELF.

A Catalogue of the Lepidoptera of Ireland. By W. F. De Vismes Kane. With a coloured plate. Pp. xviii + 166. (London: West, Newman and Co., 1901.) Price 10*s*.

THE earliest catalogues of Irish Lepidoptera were published by the Rev. Joseph Greene and the Rev. A. R. Hogan in 1854 and 1855 in the first two volumes of the *Natural History Review*, but were merely tentative, not only being very incomplete, but including many species on the evidence of collections without history, or else taken in localities where they were almost certainly introduced. These authors enumerated 636 species as Irish. The late Edwin Birchall's list, published in the *Entomologists' Monthly Magazine* from 1866 to 1868, was a much more valuable work. Mr. Birchall enumerated 974 species, though several included in the former lists were very properly omitted. The list now before us, which was originally published in the *Entomologist* from 1893 to 1900, is carefully compiled, chiefly from original sources, and brings down the subject to the present time; but the species are not numbered, and no comparison is made, as should have been done, with the number given in Mr. Birchall's catalogue.

Mr. De Vismes Kane's book will be very useful to entomologists visiting Ireland, or to those anxious to study the character of the Irish fauna from a Lepidopterous point of view. This is discussed by the author in his introduction, in which he refers not only to the comparative poverty of the fauna, both as regards number of species and of individuals, even in comparison with England, but states that the climate has been so unfavourable to insects of late years that they have become still scarcer than before, while some species, formerly common in certain localities, have apparently disappeared entirely. On p. xviii. the author alludes to his having assisted Colonel Cooper in 1885, 1886 and 1887 in the attempt to introduce various Continental species into Sligo, experiments which, happily, failed. He adds: "The attempted acclimatisation of such exotics as the above I consider wholly unobjectionable, since if it were successful, none of the species could have been mistaken for natives." Among these "unobjectionable species" was *Porthetria* (or *Liparis*) *dispar*, the gipsy moth, the introduction of which might have been one of the most grievous calamities that has befallen Ireland for many years; and this gives us the opportunity of suggesting that the Government should absolutely prohibit the rearing of any species in the open which are known to be destructive abroad, notwithstanding their being rare or unknown in the British Islands; while a specially heavy penalty should be attached to the introduction of living specimens in any stage or for any purpose of such species as *Liparis dispar*, as in the case of the not more destructive Colorado potato beetle. What would Colonel Cooper have thought if in a few years he had found that the whole of his forests were being stripped of their leaves by the larvæ of *Liparis dispar*, as might easily have been the case had the climate and conditions proved favourable to the insect?

An Atlas of the Medulla and Midbrain. By Florence R. Sabin. Pp. 123; 7 coloured plates, one black plate and 52 figures. (Baltimore, Md., U.S.A.: The Friedenwald Company, 1901.) Price 1·75 dollars.

THIS book consists of a detailed account of a model of the medulla oblongata, pons Varolii and mesencephalon, which was made in the anatomical laboratory of the Johns Hopkins University by a reconstruction in wax of every alternate slice of a series of horizontal sections of the brain-stem of a new-born babe. The sections had been stained by the method of Weigert, so as to differentiate clearly the various nerve tracts, which are so distinct, the one from another, at the time of birth.

In the reconstruction only the important nerve tracts and the compact masses of grey matter have been represented, so that a glance at the model reveals the exact shape and relations of the peculiarly-contorted grey-masses and intertwining fibre-tracts, and enables the student to form an accurate mental picture of the most complicated and difficult region of the brain, such as no other method of study can convey.

Miss Sabin has carried out the arduous and laborious task of building the reconstruction in a manner so careful and patently successful that for the first time an accurate and trustworthy model is provided of a region which so many people have hitherto attempted to represent graphically by less tedious and correspondingly more inaccurate means.

The series of drawings representing the wax reconstruction has been so happily executed by Mr. Max Brödel that the model itself is hardly necessary.

Miss Sabin's description is full and complete and is illustrated by a large number of drawings both of the horizontal sections, from which the model was built up, as well as a "control series" of transverse sections of another brain-stem of the same age.

The view obtained of familiar structures is so novel, and one's attention so riveted in the mental accommodation, that the reader hardly looks for new observations. Nevertheless, the author has not only critically summarised the current literature of the structure of the medulla, pons and midbrain, but has also added to our knowledge of these regions.

The bibliography, which is intended for students, attains the happy mean of being sufficient without being bewildering.

In a work which is so happily conceived and so admirably executed there is little call for criticism. In perusing the work we noticed only one misprint. One of the figures (Fig. 50) has been misplaced; and it would be of considerable advantage to the student if Plate viii. were inverted so that the parts might be placed as they are in the body (and in Plate iii.).

This book and the model which it describes must convince anyone, who has carefully studied the structure of the brain-stem by means of the examination of sections, of the inadequacy of the conception of this complex region which he can acquire by such means; and it will be an invaluable aid for conveying to students an accurate understanding of this important part of the brain, which could not otherwise be acquired even by months of careful study. G. E. S.

Les Variations de Longeur des Glaciers. By Charles Rabot. Pp. 250. (Geneva: Georg and Co., 1900.)

THE study of the variations in the lengths of glaciers is one that has formed the object of investigation of many workers, and as the subject, besides being of considerable interest, is one in which exact information is very difficult to secure, various opinions may be formed as to the lengths of the periods of variations deduced.

What is therefore wanted to render deductions more exact is a great number of observations, spread over a considerable interval of time, and the more the observa-

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tions can be made on a uniform plan, the more accurate will be the results obtained.

In February 1897, M. Rabot published the first part of the present work on the variations of the lengths of glaciers in the temperate and Arctic regions, and since that time the subject has been taken up by several other enthusiastic workers, so that now important information has accumulated. Thus Prof. Erich von Drygalski has made a study of the glaciers in Greenland, Prof. E. Richter has worked at the glaciers in Norway, while Mr. Israel Russell has confined his attention to North America.

In the book before us M. Rabot brings together all the data concerning the measures and appearances of the glaciers in the Arctic and temperate regions, giving references in each case to the original source of information. In the last chapter he brings together the conclusions to which he has arrived, but the reader must be referred to the book itself for a full account of them. The main results may, however, be here briefly expressed, and they are as follows :—

Prior to the eighteenth century, glaciers were much less extensive than they are to-day. During the eighteenth century and up to the first years of the nineteenth, an enormous increase, surpassing the amplitude of a single variation, occurred. Glaciers invaded territories which had never been previously occupied. This increase was general and affected all those in the northern hemisphere. During the nineteenth century the variation was indecisive. In some regions a considerable increase followed by a slight diminution in glaciation was noted, while in others the glaciers, after having remained at a maximum up till nearly the end of the century, diminished slightly. In no part was there such a considerable regression observed as that recorded in the Alps during the last fifty years.

With regard to the question of the oscillations of the lengths of glaciers in consequence of the variations of climate, which Prof. Richter has indicated does occur in the case of the Alpine glaciers, M. Rabot suggests that our knowledge is at present too incomplete to settle such a point with certainty.

Before bringing these remarks to a conclusion it may be added that this important work adds much to the advancement of our knowledge of the secular variations of the lengths of glaciers, and M. Rabot is to be congratulated on the important part he has so successfully played in its production.

Experimental Hygiene. By A. T. Simmons, B.Sc., and E. Stenhouse, B.Sc. Pp. viii + 322. (London: Macmillan and Co., Ltd., 1901.) Price 2*s.* 6*d.*

IN their preface the authors state that the value of an introduction to the scientific method in the school training of both sexes is now recognised. That is so; but the scope and treatment of this scientific matter is the subject of a considerable amount of controversy at the present time among different authorities. Certainly no more suitable means exist of illustrating physical and chemical laws than by demonstrating their operation in the ordinary every-day occurrences with which the student is familiar.

It is no exaggeration to say that without some scientific knowledge the intelligent appreciation of the principles of hygiene and domestic economy is impossible. The writers of the work are therefore to be congratulated on having undertaken it with so excellent a motive, and one turns with considerable interest to the subject-matter to see how far they may be judged to have attained their object.

By the authors' scheme each subject is dealt with by first describing a few simple experiments and their results, then the physical and chemical principles responsible for those results are explained, and lastly it is pointed out how these principles are applied, or how they serve to explain certain every-day occurrences. At the end of each chapter there is a brief summary of the facts therein dealt with, and a series of exercises are then set out for the student. The book is well balanced throughout in its treatment of a large variety of scientific facts, and the matter is sound and well selected. The sole instance which we have noted in which exception may be taken to the teaching has reference to a simple means of filtering water. On pp. 148–149 the student is advised to clean a flower-pot and plug the hole at the bottom with a piece of sponge, then to place sand, with pebbles or charcoal, into the pot. Such a filter would not be efficient, and the householder would be safer if in his wisdom he preferred to drink the unfiltered water rather than make use of it.

The book concludes with an excellent chapter upon micro-organisms, where, in only nine pages, an account is given of those interesting growths which well meets the requirements of such a work. It is, in short, just sufficient to give the student an intelligent appreciation of what germs are. The book can be confidently recommended. It is of a handy size and well printed and bound.

Dictionary of Philosophy and Psychology. Edited by J. M. Baldwin. Vol. i. Pp. xxiv + 644 (A—Laws of Thought). (New York: The Macmillan Co. London: Macmillan and Co., Ltd., 1901.) Price 21*s.* net.

THIS long-promised work will be of the highest value to every worker in fields which are in any way touched by psychological or philosophical thought. The contributors are almost all men of the highest eminence in their subjects, and the general editor has long been known as one of the ablest of the younger American psychologists. Some of the longer articles (*e.g.* "Brain") are really scientific treatises in miniature; where brevity is possible the articles are most laudably brief. A particularly valuable feature of the work is the series of monographs on philosophical terminology (arts. "Greek Terminology," "Hegel's Terminology," "Kant's Terminology"), by Prof. Royce, of Harvard. The outward appearance and the typography of the book reflect the greatest credit on the publishers and the Oxford University Press.

The end of the alphabet is to be reached in vol. ii., and vol. iii. will consist of a series of full bibliographies of the various departments of philosophical and psychological literature. A. E. T.

Die Vogelwelt des Amazonenstrômes; Enstanden als Atlas zu dem Werke "Aves do Brazil." Von Dr. Emil A. Goeldi (1894–1900). Part i. (Zurich: Polygraphischen Institut, 1900.)

WE have received from the Polygraphischen Institut of Zurich a copy of the first part of this atlas, which is merely a replica in German of the one noticed in our issue of August 22, 1901, under its Portuguese title of "Album de Aves Amazonicas." In fact, it is only the cover that has been altered, the descriptions of the plates themselves remaining in the original Portuguese. We have nothing to add to the remarks made in the notice referred to, except that the plates are excellent examples of three-colour printing.

The Bettesworth Book. Talks with a Surrey Peasant. By George Bourne. Pp. vi + 325. (London: Lamley and Co., 1901.) Price 5*s.* net.

FROM a scientific point of view there is little of interest in this book, but as a realistic record of the thoughts and experiences of a Surrey labourer, reproducing more or less the dialect of the county, the conversations are certainly worth preserving. There is no attempt at fine

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